

METHODS FOR MOTION ESTIMATION WITH  
ADAPTIVE MOTION ACCURACY

ABSTRACT OF THE DISCLOSURE

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Methods for motion estimation with adaptive motion accuracy of the  
present invention include several techniques for computing motion vectors of high pixel  
accuracy with a minor increase in computation. One technique uses fast-search strategies  
in sub-pixel space that smartly searches for the best motion vectors. An alternate  
10 technique estimates high-accurate motion vectors using different interpolation filters at  
different stages in order to reduce computational complexity. Yet another technique uses  
rate-distortion criteria that adapts according to the different motion accuracies to  
determine both the best motion vectors and the best motion accuracies. Still another  
technique uses a VLC table that is interpreted differently at different coding units,  
15 according to the associated motion vector accuracy.